

REMARKS

The claims have been amended to place them in a format more customary to US patent practice. Support for new claims 15-16 can be found in original claim 1. Support for new claim 17 can be found in the Examples. Support for new claims 18- 23 can be found at page 8 and 9 of the specification. Support for new claim 24 can be found in original claim 1. Support for new claims 25 and 26 can be found for example at page 12, line 20 of the specification. No new matter has been added.

Although not necessary, the first sentence of the specification has been amended as desired by the Examiner.

Rejections under 35 U.S.C §102

Claims 1-3, 6-7 and 10-14 stand rejected under 35 USC §102 as allegedly being anticipated by G. Helchen et al.: (Houben-Weyl Methods of Organic Chemistry 4th Edition).

Helchen et al refers to the preparation of α -amino alcohols. It is believed that the amendments to the claims render the rejection moot. Helchen et al. is silent regarding compounds of formula I, which have a CH₂-CH₂-group between the alcohol group and the amino group (i.e., 3-aminoalcohols). Thus, it is respectfully requested that the rejection under 35 USC §102 be removed.

Rejections under 35 U.S.C §103

Claims 1-4 and 5 stand rejected under 35 USC §103 as allegedly being obvious over G. Helchen et al.: (Houben-Weyl Methods of Organic Chemistry 4th Edition) in view of Sakuraba et al (1992) and further in view of Sakuraba et al (1995).

Helchen et al. is silent regarding compounds of formula I where n denotes 1, 2 or 3.

Sakuraba et al. (1992) refers to the asymmetric preparation of γ -aminoalcohols (n=2) using a MCCPM-Rhodium complex. Sakuraba discloses hydrogenation of compounds with a

dimethyl amine at the alpha position (n=0) and for comparison purposes, discloses data obtained with the ligand (R)(S)-BPPFOH complexed to a Rhodium metal. However, as with Sakuraba et al (1995) the reaction was "ineffective" for the hydrogenation of 3a (n=2), as can be seen in table 1 (entry 8).

Sakuraba et al (1995) describes the asymmetric hydrogenation of β -amino ketone derivatives using ligands 1a-1c. See table 1. The ligands 1a-1c, are not encompassed by Applicants' claims. At col. 2, Sakuraba (1995) states, "the ligand (R)(S)-BPPFOH (7), which has been successfully used for rhodium catalyzed asymmetric hydrogenation of α -amino ketone (n=0), was ineffective for our present asymmetric hydrogenation." As can be seen, at page 749, Table 2, the reduction of the corresponding alcohols results in "ineffective" enantioselectivity.

Thus, particularly with respect to compounds in which n=1 (e.g., claim 4, 26), only Sakuraba et al. (1995) teaches compounds where n=1. As noted above, the n=1 compounds are only taught with ligands 1a-1c, which are not within the scope of Applicants' claims. Ligands 1a-1c work well and result in 100% conversion and ee% values ranging from 67.5 % to 90.8%. Therefore, a skilled worker would not be motivated to employ with n=1 compounds a ligand taught for use with the different compounds in table 2, which the reference states were "ineffective". See page 748, Col. 2, lines 10-12.

Furthermore, a skilled worker would recognize that in order to obtain a secondary amino group resulting in an amino alcohol, which is similar to an amino alcohol derived from the process of the present invention, a further debenzylation transformation step is required. See, for example, the bottom left column of page 749. As noted on page 6 lines 13-19 of the specification, the process according to the present invention results in the desired enantiomer of the end product with high selectivity and yield without the need for further transformations. Additionally, as can be seen at the bottom left column of page 751, Sakarba (1995) teaches the use of stoichiometric amounts of a chiral reagent.

Helchen, Sakuraba et al (1992) and Sakuraba et al (1995) are particularly silent regarding a process of preparing an n=1 compound that is obtained in an enantiomeric excess of at least 92.8% ee, as in new claim 17. Nor do the references teach or suggest a process using ligand A, as in original claim 8 and new claims 24 and 25.

Thus, based on the above remarks it is respectfully requested that the rejection under 35 USC §103 be removed.

Information Disclosure Statement

Additional copies of WO02/055477, WO02/04401 and DE 4330730, which were cited on PTO form 1449 submitted on 25 February 2005, are attached herewith along with their English language abstracts. US 5,510,503 is the English language equivalent document to DE 4330730. The Examiner is respectfully requested to initial the form 1449 indicating that the references have been considered.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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